

ADDITIONAL NOTES ON THE LIFE HISTORY OF
OPODIPHTHERA FERVIDA (JORDAN)
(LEPIDOPTERA: SATURNIIDAE)

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Abstract

The egg and early instar larvae of *Opodiphthera fervida* (Jordan) are described and figured.

Introduction

Opodiphthera fervida (Jordan) occurs in rainforest between Mossman and Paluma in northeastern Queensland (Common 1990). Adults first appear in October after summer storms and have been collected until May, suggesting at least two broods. Adults readily come to light, with males encountered more frequently than females. Larvae are regularly found during summer months, particularly at higher altitudes on the Atherton Tablelands (900-1200 m). At Atherton during December and January, development times were: eggs six days; first to final instar larva 24-30 days; adults emerging from pupae after 15-25 days. Some pupae go into diapause, with adults emerging the following season. From reared specimens, the ratio of males to females is approximately 3:2. The final instar larva has been briefly described, aspects of its biology discussed and comparisons made with the closely related *O. astrophela* (Walker) by Lane (1994). This paper presents further notes, descriptions and illustrations of the egg and larval instars.

Life history notes

Foodplants. *Maesa muelleri* Mez and *Rapanea porosa* (F. Muell.) Mez (Myrsinaceae).

Egg (Fig. 1). Flat type, ovoid in shape, approximately 1 mm x 0.8 mm; light brown in colour. The eggs are laid either in a straight or curved line of 3-20 on the underside of foodplant leaves, or occasionally in a linear pyramid formation (totalling 60-80 eggs) up to 10 rows high on the foodplant stems. This behaviour of laying eggs in a pyramid formation is unique in the Australian Saturniinae, but has been reported in the domesticated Asian Attacine species *Samia ricini* (Donovan) (Peigler and Wang 1996).

First instar larva (Fig. 2). Length 5-7 mm. Head, body and legs light brown. Each segment carries small slightly raised scoli, coloured light yellow, that bear very fine, short setae. Larvae feed gregariously on juvenile foliage, in groups of several up to forty, resting and feeding on the undersides of leaves.

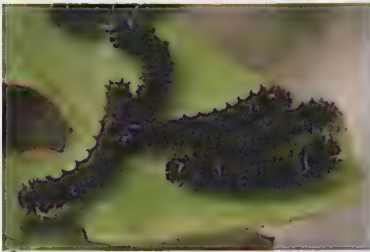
Second instar larva (Fig. 3). Length 7-18 mm. Head, body and legs black. Raised scoli black, proportionately larger than those of first instar larva. Numerous very fine white setae arise from scoli. Larvae still feed in gregarious clusters, but begin to disperse in smaller groups around the foodplant.



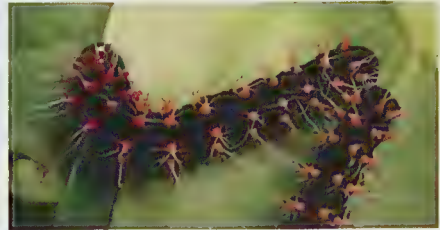
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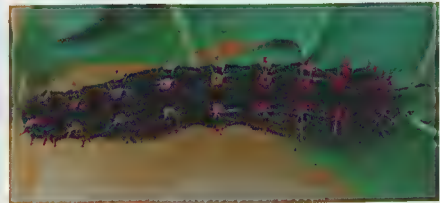
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Figs 1-7. Early stages of *Opodiphthera fervida*. (1) egg batches; (2) first instar larvae; (3) second instar larvae; (4-5) third instar larvae; (6-7) fifth instar larva.

Third instar larva (Figs 4-5). Length 18-50 mm. Head and thoracic legs dark brown; body and prolegs jet black. Raised scoli are reddish orange on thoracic segments, changing to orange on abdominal segments. Long white setae extend from scoli. Shorter white setae arise from prolegs. Spiracles distinctly white. A yellow lateral line connects orange scoli below spiracles. Larvae disperse around the foodplant and feed singly.

Fourth instar larva. Length 50-75 mm. Similar to fifth instar but not as stocky.

Fifth instar larva (Figs 6-7). Length 75-90 mm. Head, body and prolegs jet black; thoracic legs reddish. Scoli are bright reddish on thoracic segments, changing to orange with red tips on abdominal segments. All scoli adorned with long white setae. Spiracles white. A yellow lateral line connects orange scoli below spiracles. Prolegs adorned with shorter white setae.

Pupation. Larvae leave the foodplants to pupate and may wander considerable distances to find a suitable pupation site. In the wild, wandering larvae were observed more than 15 metres away from their foodplant trees, both moving across foliage and on the ground. It is unclear exactly where larvae pupate in the wild, as wild pupae have not been located. In captivity, just prior to pupating, mature larvae always move to the base of containers, or to the base of sleeves placed on foodplants, and push their way into crevices, fallen leaves or debris, where they pupate singly or in clusters, with surrounding leaves or debris wrapped around the pupal cocoons. Cocoons are dark brown in colour, with the silk walls relatively thin, giving the cocoon minor rigidity and stiffness, but not as stiff and rigid as *Opodiphthera eucalypti* (Scott) (Common 1990).

Acknowledgements

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References

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